BWSE-14 (02/16)

Department of Environmental Protection – Bureau of Water System Engineering
401 East State Street - P.O. Box 420
Mail Code 401-04Q
Trenton, New Jersey 08625-0420
Tel # 609-292-2957 – Fax # 609-633-1495

Lead and Copper Sample Site Selection Certification

Requirements Pursuant to 40 CFR 141.86(a)

1. PWSID #: _____ 2. System Type: ☐ CWS ☐ NTNC

3. Water System Name: _____

4. Population Served: _____

5. Contact Person: _____ 6. Phone Number: _____

7. Email Address: _____

8. Monitoring Period: From: _____ To: _____ 9. ☐ Standard ☐ Reduced

10. Minimum Number of Samples Required: _____ 11. Number of Samples Taken: _____

12. Name of Certified Laboratory: _____

13. Sample Criteria:

Systems must sample as many Tier 1 sites as possible. Any community water system with insufficient Tier 1 sampling sites shall complete its sampling pool with Tier 2 sampling sites. If the system has insufficient Tier 2 sampling sites, the sampling pool shall be completed with Tier 3 sampling sites. If it is not known with certainty whether lead is present in the plumbing, the site should be designated as a non-tier site.

Yes	No		
☐	☐	a. Are the same sampling sites used as in the previous monitoring period? If no, complete and submit a Lead and Copper Sample Site Change Form (BSDW-56)	
☐	☐	b. Are all samples from Tier 1 sites?	See attached *Instructions- #13* for more information.
☐	☐	c. If insufficient Tier 1 sites are available, are Tier 2 sites used?	
☐	☐	d. If insufficient Tier 2 sites are available, are Tier 3 sites used?	
☐	☐	e. Have the Tier 1 sites been verified to meet the requirements of a Tier 1 site? (i.e. documentation can be provided proving the site meets the requirements)	
☐	☐	f. Does the system have lead service lines? If yes, write in comments section how many	
☐	☐	g. Has the system verified which lines are lead service lines? (i.e. visual inspection, record drawings, county appraisal records, interviews with residents, etc.)	
☐	☐	h. If the distribution system contains lead service lines, are 50% of the samples collected from sites with lead service lines?	

Comments:

_____

_____

_____

_____

14. Sampling Site Pool Selection (Include all sample sites used in this sampling event. Use additional pages as needed)

No.	Sample Location/Street Address	Tier 1, 2, 3, or Other	Sample Category[1] (Tier 1 only)	Piping Material[2]	Regular or Alternate site[3]
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

[1] See *Instructions- #14c*
[2] Denote materials used for service line and building plumbing using: C = copper; G = galvanized; L = lead; or P = plastic/PVC
[3] Denote selection using: R = regular site or A = alternate site

15. *I have verified and certify*:

a) All the sites from which lead and copper tap samples were collected were selected from a pool of targeted Tier 1, 2, 3, or other sample sites, consistent with 40 CFR 141.86(a).
b) Sample sites were selected in accordance with 40 CFR 141.86(a) are representative of the distribution system and specifically of areas of the system that are most vulnerable to corrosion of lead and copper in water.
c) First draw samples for lead and copper were one liter in volume and stood motionless in the plumbing system of each sampling site for a minimum of six hours, consistent with 40 CFR 141.86(b).
d) First draw samples collected from a single family residence were collected from cold water kitchen taps or bathroom sink taps.
e) First draw samples from non-residential buildings were collected from interior building taps from which water is typically drawn for consumption.
f) Each resident who volunteered to collect tap water samples from his/her home has been properly instructed by (insert water system's name) _____ in the proper methods for collecting lead and copper samples.
g) The information listed in this form is true and accurate to the best of my knowledge and belief.

Owner/Executive Director Signature: _____ **Date:** _____

Printed Name: _____ **Title:** _____

W-Operator Signature: _____ **Date:** _____

Printed Name: _____ **License Number:** _____

Instructions for Completing Lead and Copper Sample Site Selection Certification Form

1. PWSID #: Enter the 7-digit public water supply ID number.

2. SYSTEM TYPE: Select if the system is a community water system (CWS) or a non-transient non-community water system (NTNC).

3. WATER SYSTEM NAME: Enter the name of the public water system where sampling is being conducted.

4. POPULATION: Enter the number of customers served for entire service area.

5. CONTACT PERSON: Enter name of the authorized water system official.

6. PHONE NUMBER: Enter phone number for contact person.

7. EMAIL ADDRESS: Enter the email address for the contact person.

8. MONITORING PERIOD: Enter the beginning and end dates of the monitoring period during which the sampling took place (i.e. from 01/01/2014 – 12/31/2014).

9. MONITORING STANDARD or REDUCED: Select whether the most recent sampling event was standard (every 6 months) or reduced (annual or triennial).

10. MINIMUM NUMBER OF SAMPLES REQUIRED: This number is in accordance with 40 CFR 141.86(c). See the table below taken from 40 CFR 141.86(c).

System Size (number of people served)	Number of Sites (standard monitoring)	Number of Sites (reduced monitoring)
> 100,000	100	50
10,001 – 100,000	60	30
3,301 – 10,000	40	20
501 – 3,300	20	10
101 – 500	10	5
≤ 100	5	5

11. NUMBER OF SAMPLES TAKEN: Indicate the number of tap samples taken for lead and copper analysis in the indicated monitoring period.

12. NAME OF CERTIFED LABORATORY: Enter the name of the certified laboratory that performed the lead/copper analyses on samples taken in the indicated monitoring period.

13. SAMPLE CRITERIA: Answer the questions accordingly, briefly explain, where necessary, the reason for your actions in the comments section.

    The Tier classifications in 40 CFR 141.86(a)3-5 for community water systems are as follows:
    a. A Tier 1 site shall consist of single family structures that:
        i. Contain copper pipes with lead solder installed after 1982 or contain lead pipes; and/or

ii. Are served by a lead service line. When multiple-family residences comprise at least 20% of the structures served by a water system, the system may include these types of structures in its sampling pool.

b. A Tier 2 site shall consist of buildings, including multiple-family residents that:
   i. Contain copper pipes with lead solder installed after 1982 or contain lead pipes: and/or
   ii. Are served by a lead service line.

c. A Tier 3 site shall consist of single family structures that contain copper pipes with lead solder installed before 1983.

The Tier classifications in 40 CFR 141.86(a)6-7 for non-transient non-community water systems are as follows:

a. A Tier 1 site shall consist of buildings that:
   i. Contain copper pipes with lead solder installed after 1982 or contain lead pipes; and/or
   ii. Are served by a lead service line.

b. If insufficient Tier 1 sites are available, the system shall complete its sampling pool with sampling sites that contain copper pipes with lead solder installed before 1983. If additional sites are needed to complete the sampling pool, representative samples throughout the distribution system shall be used.

14. SAMPLING SITE POOL SELECTION:

a. SAMPLING LOCATION: Enter the street address of the location where each lead and copper sample is taken.

b. TIER 1, 2, 3, OR OTHER: Enter the tier classification of the site.

c. SAMPLE CATEGORY: Use the following numbers to designate the location criteria being met by the sample site, only if it is a Tier 1 site.

Sample Categories For Tier 1 Sites	
1	Single family residence with lead service line
2	Single family residence with lead solder copper piping constructed after 1982
3	Single family residence with lead plumbing
4	Multiple-family residence with either lead service line, lead solder copper piping constructed after 1982, or lead plumbing (when multiple-family residence comprise at least 20% of the total service connections)

d. PIPING MATERIAL: Materials used for service line and building plumbing use: C = copper; G = galvanized; L = lead; or P = plastic/PVC

e. REGULAR OR ALTERNATE SITE: Denote selection using: R = regular site or A = alternate site

15. CERTIFICATION: An authorized water system official or owner and the licensed (W) water operator must sign and date the form.

Return Lead and Copper Sample Site Selection Certification AND all Sampling Site Materials Evaluation Form to:

Mail Code 401-04Q
Division of Water Supply & Geoscience
Water System Operations Element
Bureau of Water System Engineering
401 E. State Street – PO Box 420
Trenton, New Jersey 08625-0420

BWSE-15 (02/16)

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Tel # 609-292-2957 – Fax # 609-633-1495

Sampling Site Materials Evaluation Form

Requirements Pursuant to 40 CFR 141.86(a)
TO BE COMPLETED FOR EACH SAMPLE SITE

1. Water System Name: _____ **2. PWSID #:** _____

3. Sample Street Address: _____

4. Sample Location: _____ **5. Tier Classification:** _____ **6. Sample Category (Tier One Only):** _____

7. Piping Material (service line and building plumbing): _____ **8. Regular Site** ☐ **Alternate Site** ☐

9. Mark the resource(s) you used in your investigation in the blanks provided for the sample site listed above. If you used a resource which is not listed below, indicate that in the blanks provided next to "Other Sources".

Distribution System Materials: Sources available to determine lead service lines or lead goosenecks in the distribution system.

- ☐ Distribution system maps and record drawings (provide copy)
- ☐ Capital improvement plans and/or master plans for distribution system development
- ☐ Utility records including meter installation records, customer complaint investigations and all historical documentation which indicate and/or confirm the location of lead service connections
- ☐ Results from service line sampling where lead service lines are suspected to exist but their presents is not confirmed
- ☐ Documented interviews of senior personnel
- ☐ Results from community survey

Interior Plumbing Materials: Sources available to determine if residential or non-residential buildings have interior lead pipe or copper pipe with lead solder joints.

- ☐ County appraisal district records
- ☐ Contacts within the water system, municipal office or other local officials
- ☐ Survey results from area plumbers who are asked about when and where copper pipe with lead solder was used
- ☐ Documented interviews of residents- letters, phone survey, personal contact, etc.
- ☐ Documented interviews of local contractors, developers, and builders

Other Sources (Explain):

I have verified and certify the information listed in this form is true and accurate to the best of my knowledge and belief.

Owner/Executive Director Signature	Date
Printed Name	Title
W-Operator Signature	Date
Printed Name	Title

Instructions for Completing Sampling Site Materials Evaluation Form

The Sampling Site Materials Evaluation Form must be completed for each lead and copper sampling site

1. WATER SYSTEM NAME: Enter the name of the public water system where sampling is being conducted.
2. PWSID #: Enter the 7-digit public water supply ID number.
3. SAMPLE STREET ADDRESS: Enter the street address of the location where the lead and copper sample is taken.
4. SAMPLE LOCATION: Indicate what tap is used to take the sample.
5. TIER CLASSIFICATION: Indicate the tier classification of the site in accordance with 40 CFR 141.86(a).
6. SAMPLE CATEGORY: Use the following numbers to designate the location criteria being met by the sample site, only if it is a Tier 1 site.

Sample Categories For Tier 1 Sites	
1	Single family residence with lead service line
2	Single family residence with lead solder copper piping constructed after 1982
3	Single family residence with lead plumbing
4	Multiple-family residence with either lead service line, lead solder copper piping constructed after 1982, or lead plumbing (when multiple-family residence comprise at least 20% of the total service connections)

7. PIPING MATERIAL: Materials used for service line and building plumbing use: C = copper; G = galvanized; L = lead; or P = plastic/PVC
8. REGULAR OR ALTERNATE SITE: Denote selection by checking correct box.
9. INVESTIGATION: Mark the resource(s) you used in your investigation to verify the materials of the service line and building plumbing.

The authorized water system official or owner and the licensed (W) water operator **must** sign and date the form.

Return Lead and Copper Sample Site Selection Certification AND all Sampling Site Materials Evaluation Form to:

Mail Code 401-04Q
Division of Water Supply & Geoscience
Water System Operations Element
Bureau of Water System Engineering
401 E. State Street – PO Box 420
Trenton, New Jersey 08625-0420

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

FEB 29 2016

OFFICE OF
WATER

MEMORANDUM

SUBJECT: Clarification of Recommended Tap Sampling Procedures for Purposes of the Lead and Copper Rule

FROM: Peter C. Grevatt, Director
Office of Ground Water & Drinking Water

TO: Water Division Directors
Regions I - X

The Lead and Copper Rule, 40 C.F.R. Sections 141.80 to 141.91, requires monitoring at consumer taps to identify levels of lead in drinking water that may result from corrosion of lead-bearing components in a public water system's distribution system or in household plumbing. These samples help assess the need for, or the effectiveness of, corrosion control treatment. The purpose of this memorandum is to provide recommendations on how public water systems should address the removal and cleaning of aerators, pre-stagnation flushing, and bottle configuration for the purpose of Lead and Copper Rule sampling.

Removal and Cleaning of Aerators

EPA issued a memorandum on *Management of Aerators during Collection of Tap Samples to Comply with the Lead and Copper Rule* on October 20, 2006. This memorandum stated that EPA recommends that homeowners regularly clean their aerators to remove particulate matter as a general practice, but states that public water systems should not recommend the removal or cleaning of aerators prior to or during the collection of tap samples gathered for purposes of the Lead and Copper Rule. EPA continues to recommend this approach. The removal or cleaning of aerators during collection of tap samples could mask the added contribution of lead at the tap, which may potentially lead to the public water system not taking additional actions needed to reduce exposure to lead in drinking water. EPA's recommendation about the removal and cleaning of aerators during sample collection applies only to monitoring for lead and copper conducted pursuant to 40 C.F.R. 141.86.

Pre-Stagnation Flushing

EPA is aware that some sampling instructions provided to residents include recommendations to flush the tap for a specified period of time prior to starting the minimum 6-hour stagnation time required for samples collected under the Lead and Copper Rule. This practice is called pre-stagnation flushing. Pre-stagnation flushing may potentially lower the lead levels as compared to when it is not practiced.

Flushing removes water that may have been in contact with the lead service line for extended periods, which is when lead typically leaches into drinking water. Therefore, EPA recommends that sampling instructions not contain a pre-stagnation flushing step.

Bottle Configuration

EPA recommends that wide-mouth bottles be used to collect Lead and Copper compliance samples. It has become apparent that wide-mouth bottles offer advantages over narrow-necked bottles because wide-mouth bottles allow for a higher flow rate during sample collection which is more representative of the flow that a consumer may use to fill up a glass of water. In addition, a higher flow rate can result in greater release of particulate and colloidal lead and therefore is more conservative in terms of identifying lead concentrations.

Conclusion

EPA is providing these recommendations for collection of Lead and Copper Rule tap samples to better reflect the state of knowledge about the fate and transport of lead in distribution systems. The three areas discussed above may potentially lead to samples that erroneously reflect lower levels of lead concentrations. The recommendations in this memorandum are also consistent with the recommendations provided by the EPA's Flint Task Force. For more information about the Task Force please view EPA's website at: http://www.epa.gov/flint.

To provide further information on this topic, EPA included an amended "Suggested Directions for Homeowner Tap Sample Collection Procedures" in Appendix D of the 2010 revision of *Lead and Copper Rule Monitoring and Reporting Guidance for Public Water Systems* (EPA 816-R-10-004). This document can be found at:
http://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100DP2P.txt

Please share these recommendations with your state drinking water program directors. If you have any questions, please contact Anita Thompkins at thompkins.anita@epa.gov.

Attachment

cc: James Taft, Association of State Drinking Water Administrators

Suggested Directions for Homeowner Tap Sample Collection Procedures
Revised Version: February 2016

These samples are being collected to determine the lead and copper levels in your tap water. This sampling effort is required by the U.S. Environmental Protection Agency and your State under the Lead and Copper Rule, and is being accomplished through a collaboration between the public water system and their consumers (e.g. residents).

Collect samples from a tap that has not been used for at least 6 hours. To ensure the water has not been used for at least 6 hours, the best time to collect samples is either early in the morning or in the evening upon returning from work. Be sure to use a kitchen or bathroom cold water tap that has been used for drinking water consumption in the past few weeks. The collection procedure is described below.

1. Prior arrangements will be made with you, the customer, to coordinate the sample collection. Dates will be set for sample kit delivery and pick-up by water system staff.
2. There must be a minimum of 6 hours during which there is no water used from the tap where the sample will be collected and any taps adjacent or close to that tap. Either early mornings or evenings upon returning home are the best sampling times to ensure that the necessary stagnant water conditions exist. Do not intentionally flush the water line before the start of the 6 hour period.
3. Use a kitchen or bathroom cold-water faucet for sampling. If you have water softeners on your kitchen taps, collect your sample from the bathroom tap that is not attached to a water softener, or a point of use filter, if possible. Do not remove the aerator prior to sampling. Place the opened sample bottle below the faucet and open the cold water tap as you would do to fill a glass of water. Fill the sample bottle to the line marked "1000-mL" and turn off the water.
4. Tightly cap the sample bottle and place in the sample kit provided. Please review the sample kit label at this time to ensure that all information contained on the label is correct.
5. If any plumbing repairs or replacement has been done in the home since the previous sampling event, note this information on the label as provided. Also if your sample was collected from a tap with a water softener, note this as well.
6. Place the sample kit in the same location the kit was delivered to so that water system staff may pick up the sample kit.
7. Results from this monitoring effort and information about lead will be provided to you as soon as practical but no later than 30 days after the system learns of the tap monitoring results. However, if excessive lead and/or copper levels are found, immediate notification will be provided (usually 1-2 working days after the system learns of the tap monitoring results).

Call_____at_____if you have any questions regarding these instructions.

TO BE COMPLETED BY RESIDENT

Water was last used: Time_____ Date_____
Sample was collected: Time_____ Date_____

Sample Location & faucet (e.g. Bathroom sink): _____

I have read the above directions and have taken a tap sample in accordance with these directions.

Signature_____ Date_____